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D. Lawrence
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT application of:

Applicant: James Robert Durrant et al.

Application No.: 09/673,538 —

Filed: October 17, 2000 —

Title: BIOCHEMICAL DEVICES AND THEIR METHODS OF MANUFACTURE —

Examiner: Lyle A. Alexander

Art Unit: 1743

Attorney Docket No. DYOUP0204US

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703-872-9311

REPLY TO OFFICE ACTION DATED JUNE 6, 2002

Box AF
Commissioner for Patents
United States Patent and Trademark Office
Washington, DC 20231

Sir:

Favorable reconsideration of the above-referenced application is respectfully requested in view of the following amendments and remarks.

The Examiner has rejected claims 17-21 as being indefinite. According to the Examiner, the recitation "contacting said preformed film with a protein..." does not further limit the preamble that is directed to a method of manufacture. Reconsideration of this rejection is respectfully requested, in that "contacting said preformed film with a protein..." is indeed a step of the method of manufacture, which step involves bringing a protein into contact with the film in order that it can be immobilized on that film. Thus, it provides an additional method step and clearly therefore limits the claim. Withdrawal of the rejection is requested.

On the merits, the withdrawal of the rejection based on Kossovsky et al. or Gerfin et al. is noted with appreciation. However, the Examiner continues to maintain the rejection based on WO 96/00198, indicating that absent a translation of the reference the Office will maintain the characterization of record of the reference.

Regarding a translation of WO 96/00198, the International Search Report indicates that U.S. Patent No. 5,885,657 is the U.S. counterpart of the reference and a copy of the '657 patent is enclosed herewith. The '657 patent, which claims priority from the same application as WO 96/00198, is not a direct translation of WO 96/00198, in that it contains some additional teachings. However, it does contain the subject matter referenced in applicant's earlier response. In particular, the list of possible uses of nanocrystalline TiO_2 can be found in column 2, lines 54-65. As can be seen, the list includes sensors and the immobilization of enzymes, but there is no connection between the two. Furthermore, Anspruch 8 of WO 96/00198, which was the claim to immobilization of enzymes in biotechnology, appears in the '657 patent as Example 6, while Anspruch 10 relating to the use as a gas sensor appears in Example 9. Thus, as can be seen the possible uses as a gas sensor and for immobilization of enzymes are two separate uses and there is no disclosure of the use of enzyme immobilization in sensors. Therefore, it is submitted that WO 96/00198 supports the position that such document discloses the use of nanocrystalline TiO_2 as a gas sensor and its completely separate use in biotechnology for the immobilization of enzymes, and that there is no disclosure or even suggestion of a biosensor comprising a nanocrystalline semiconductor with a protein film immobilized thereon.

Procedural Matters

Request is again made for an acknowledgment of consideration of EP 0 596 421. The Examiner deleted EP 0 596 421 from Form 1449 submitted with the Information Disclosure Statement submitted on October 17, 2000, for want of a translation or characterization. However, said document was cited in the International Search Report that indicates the relevance of the document. According to MPEP, no further characterization of the document is required in order to secure its consideration.

Request is again made for issuance of a filing receipt. No filing receipt has been received by the undersigned.

This application is believed to be in condition for allowance and an early action to that effect is earnestly solicited.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

By Don W. Bulson
Don W. Bulson, Reg. No. 28,192

1621 Euclid Avenue
Nineteenth Floor
Cleveland, Ohio 44115
(216) 621-1113

CERTIFICATE OF TRANSMISSION

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted by facsimile to 703-872-9311 on the date shown below.

Date: 9-6-02

Jennifer A. Moore
Jennifer A. Moore

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